

Filter Performance Monitors

PROCESS & EMISSIONS MONITORING SYSTEMS



ELECTRODYNAMIC™
INSIDE

SPECIFIC FEATURES:

- Self-contained leak monitoring system for on-line and off-line cleaned multi-compartment bag filters
- Identifies compartments with broken or leaking bags before large-scale emission events occur
- Reduces filter maintenance intervals, process down-time and filter costs



TECHNOLOGY

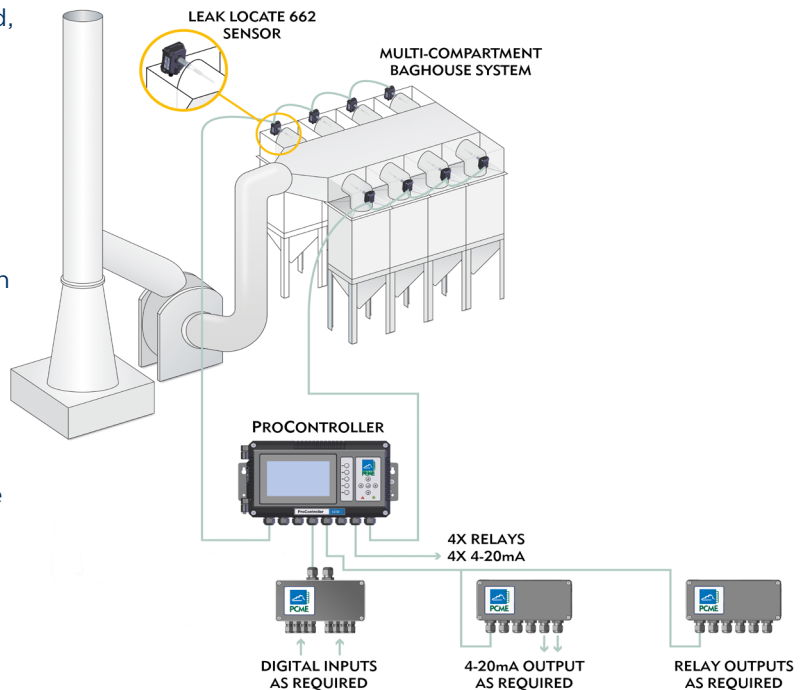
SYSTEM DESCRIPTION

The PCME LEAK LOCATE 662 is a digitally networked, multi-compartment baghouse monitoring system providing remote observation of the condition of the condition of bag and cartridge filters.

An *ElectroDynamic*™ sensor is installed in the outlet of each compartment to monitor dust emission levels. The network of sensors connected to the ProController, which provides a large graphical user interface giving a clear indication of each compartment's dust level and onward communication to a PC or PLC network.

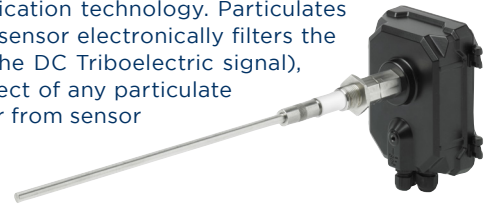
The PCME LEAK LOCATE 662 is a valuable filter-maintenance tool:

- giving advance warning of filter deterioration
- enabling users to make significant savings in spares, maintenance time and lost production time
- reducing the likelihood of large-scale emission events occurring.



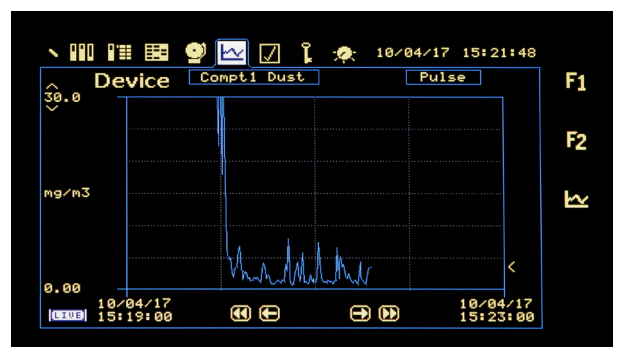
PRINCIPLE OF SENSOR OPERATION

The sensors use ENVEA's unique and patented *ElectroDynamic*™ Probe Electrification technology. Particulates in the airstream interact with the sensing rod to induce a charge signature. The sensor electronically filters the resulting signal to reject signals outside a defined frequency range (rejecting the DC Triboelectric signal), making it less susceptible to changes in particle velocity and eliminating the effect of any particulate contamination on the sensing rod (unlike Triboelectric dust monitors which suffer from sensor contamination issues).

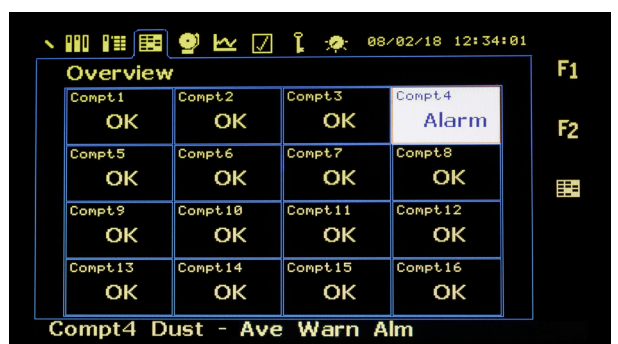


PROCONTROLLER - FEATURES AND FUNCTIONS

- Navigation keys (Up/Down/Right/Left/Enter, plus five function keys (incl. 2x user-programmable short-cut keys, 2x menu keys, and 1x back button) for rapid menu access and response
- Powering the sensor network
- Setup and configuration of the sensor network (optional setup via System Set software module, see software options below)
- Icon-driven, multi-lingual menu
- Manual configuration of Ethernet settings
- Scaling the output of sensors (to between 0 and 100%) to provide an indication of relative emission levels between compartments
- Displaying overviews of the network status and emission levels per compartment
- Providing alarm relay outputs that can be configured to suit requirements, e.g. high and high/high emission alarms, sensor status and system failures
- Providing multiple, simultaneous data viewing for up to five clients (via USB 2.0, RS-232/RS-485 over Modbus, Ethernet and separate 4-20mA outputs)
- Connecting to accessory ENVEA network modules for additional I/Os and increased network robustness (refer to the controller specifications on page 4).



On-line Pulse screen



Sensor/chamber dust level Overview screen

SPECIFICATIONS

PCME LEAK LOCATE 662

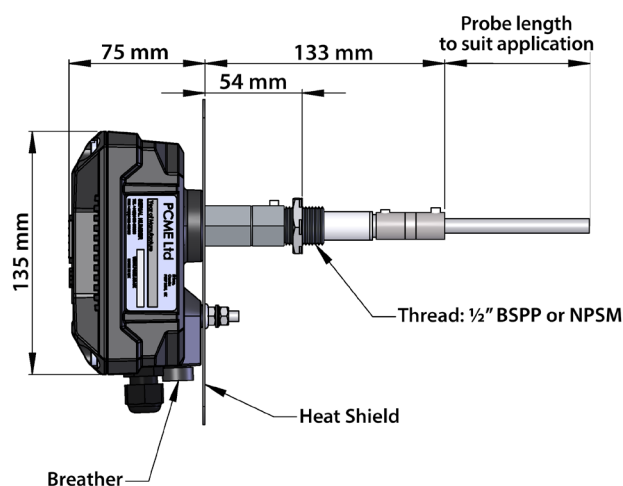
SENSOR OPTIONS AND SPECIFICATIONS

662 Sensor Options			Order Code
Flue Gas Temperature	-20 to +125°C (-4°F to 257°F) -20 to +250°C (-4°F to 482°F)	standard option	125C 250C
Rod Length	300 mm (std.) or 400, 500, 600, 800, 1000 mm	specify	RODxxxx
Rod Type	Stainless Steel Rod (½" lock nut stack connection)	standard	S
Sensor Connection	British Standard Pipe (BSP)	standard	BSPP or BSPT
	National Pipe (NP)	FoC option	NPSM or NPT
Air Purge	none	standard	0
	Air purge unit (½" BSPP or NPSM)	option	AP-BS/AP-NP
	Filter + Regulator assembly for purge fitting	option	FFR
Hazardous Zone Category	None	standard	0
	ATEX Zone 22 (Cat. 3D)	option	X22

662 Sensor Specifications	
Ambient Temperature	-20°C to +50°C (-4°F to 122°F)
Enclosure Dimensions	W 111 x H 135 x D 75 mm (4.4 x 5.3 x 3 in.)
Power Supply Voltage	24V DC (from the control unit)
Current consumption	20 mA
Sensor I/O	1x 485 (Modbus)

ProController Feature	Description
No. of Sensors/Channels	4-32 (1 sensor per chamber)
Advanced I/O	Ethernet (RJ45, 100Base T/Tx, 100 Mb/s) USB 2.0 (standard type A)
Data Logging	Capacity given for four sensors: <ul style="list-style-type: none"> Pulse log: 8 hours @ 1 s Alarm log: 500 entries
Advanced I/O	Ethernet (100Base-T/Tx, 100 Mb/s), USB 2.0 (type A, M:M)
Outputs	1x RS-485 (Modbus RTU) 1x RS-232 4x Relays (3A, @250V AC or 24V DC, configurable)
Inputs	4x Digital inputs 4x 4-20 mA inputs
Enclosure Dimensions	W 390 x H 221 x 118 mm (15.4 x 8.7 x 4.6 in.)
Enclosure Protection Rating	IP66
Ambient Temperature	-20°C to +50°C (-4°F to 122°F)
Power Supply Voltage	85-265 V AC (50/60 Hz)
Current consumption	40 W

Note: For more information related to the product, options and order codes, refer to the ProController Specification Guide (available on request from your local ENVEA representative).



SPECIFICATIONS PCME LEAK LOCATE 662

SYSTEM OPTIONS AND ACCESSORIES

ProController		Order code
Accessories	IP65 Cable Mount	ACCPRO-ETH-CONN
	USB 2.0 (standard A-to-A) cable	ACCPRO-USB-LEAD
Net Modules		Order code
ROM	Relay Output Module with 8x additional relay outputs	ACCROM
AOM	Analogue Output Module 4x 4-20 mA outputs	ACCAOM
AIM Digital	Auxiliary Input Module with 4x additional digital inputs	ACCAIM
Network Spur	For spur-linked sensor networks	ACCSPUR
Power Supply Repeater	Voltage and signal boost for extended cable runs and large sensor networks (please consult ENVEA for advice)	ACCPWR

Note: For more information related to the product, options and ordering information, refer to the PCME LEAK LOCATE 662 order codes guide (available on request from ENVEA).

		ATEX
GAS/ DUST ZONE		ZONE 22
Certificate number:		PCME18ATEX0001X
Certification code:	Outside stack (enclosure):	
	Ex tc IIIC T80°C Dc Ta = -20°C to +50°C	
	Inside stack (probe)^B:	
Ex tc IIIC T240°C Dc Ta = -20°C to +240°C		II 3D

^B The probe does not generate heat, therefore, the surface temperature is dependent upon the stack temperature, maximal 240 °C (465 °F)

ABOUT ENVEA

As a progressive environmental Company, ENVEA specialises in particulate measurement for industrial processes. With a worldwide reputation for reliability, innovation and technological excellence, the Company produces under the trademark envea™ equipment for concentration and mass monitoring for regulatory, environmental and process control requirements. A dedicated team of qualified application and sales engineers is always on hand and should be consulted in the selection and usage of the most suitable equipment for any particulate application.



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